

Serial No. 08/156,052

Please amend claim 17 as follows:

1 / 17. (Twice amended) [The system as recited in claim 7
2 comprising] A system for controlling the temperature climate in a
3 variable temperature occupant seat comprising:

4 an occupant seat having means for distributing temperature
5 conditioned air through the seat to increase a seat occupant's
6 thermal comfort;

7 at least one heat pump connected to the seat by an air conduit
8 for providing temperature conditioning air to the seat, the heat
9 pump comprising:

10 at least one thermoelectric module for temperature
11 conditioning the air;

12 at least one fan for passing the temperature conditioned
13 air through the seat to an occupant and for removing unwanted
14 thermal energy from the thermoelectric module;

15 a controller for activating and regulating the operation of
16 the thermoelectric module and fan of at least one heat pump
17 independent of occupant input after a desired mode of operation has
18 been selected;

19 means for automatically operating the controller to optimize
20 system response, to provide maximum thermal comfort to the seated
21 occupant, and to control cooling functions of the system to
22 minimize occupant discomfort and adverse physiological response;
23 and

24 an indicator switch attached to the seat to detect the
25 presence of an occupant, the indicator switch being electrically
26 connected to the controller.

Claim 18, line 1, delete "7" and replace with --17--.

Serial No. 08/156,052

Please cancel claim 19.

Please amend claim 25 as follows:

1 1825. (Amended) [The system as recited in claim 19 wherein the
2 occupant seat comprises] A system for controlling the temperature
3 climate in a variable temperature occupant seat comprising:

4 an occupant seat comprising a seat bottom and a seat back
5 portion each having means for distributing temperature conditioned
6 air through the seat and directing it to an occupant;

7 a seat back heat pump for conditioning the temperature of the
8 air and passing the air through an air conduit to the seat back,
9 the seat back heat pump comprising a main exchanger fan and at
10 least one thermoelectric module;

11 a seat bottom heat pump for conditioning the temperature of
12 the air and passing the air through an air conduit to the seat
13 bottom, the seat bottom heat pump comprising a main exchanger fan
14 and at least one thermoelectric module;

15 a temperature sensor positioned in each heat pump;

16 a controller for automatically activating and regulating the
17 speed of the main fans, and automatically selecting the mode of
18 operation for the thermoelectric module in each heat pump;

19 means for automatically operating the controller to optimize
20 system response, to provide maximum thermal comfort to the seated
21 occupant, and to control cooling functions of the system to
22 minimize occupant discomfort and adverse physiological response;
23 and

24 an indicator for detecting the presence of an occupant, the
25 indicator being electrically connected to the automatic
26 [controlling] operating means.

Serial No. 08/156,052

Please cancel claim 27

Claim 28, line 1, delete "27" and replace with --33--.

Please amend claim 33 as follows:

B3
1 5 33. (Twice amended) [The method as recited in claim 27
2 comprising] A method for controlling the temperature climate in a
3 variable temperature occupant seat, the method comprising the steps
4 of:
5 activating at least one thermoelectric module to provide
6 temperature conditioned air to be distributed through a variable
7 temperature seat;
8 activating at least one electric fan for passing the
9 temperature conditioned air through means inside of the variable
10 temperature seat;
11 sensing a system temperature and relaying the temperature
12 information to a controller;
13 automatically adjusting the electrical power to the
14 thermoelectric module when the thermoelectric module is operated in
15 a cooling mode and when the temperature of the temperature
16 conditioned air is below a minimum cooling temperature a
17 predetermined amount of time after the cooling mode has been
18 selected; and
19 automatically activating each fan and each thermoelectric
20 module by occupying the seat and automatically deactivating each
21 fan and [each] the thermoelectric module by vacating the seat.

Serial No. 08/156,052

Please amend claims 50 and 51 as follows:

1 12-50. (Amended) [The system as recited in claim 1 further
2 comprising] A system for controlling the temperature climate in a
3 variable temperature occupant seat comprising:

4 an occupant seat having means to distribute temperature
5 conditioned air through the seat and the temperature conditioned
6 air through the seat for the purpose of increasing a seat
7 occupant's thermal comfort;

8 at least one heat pump for providing temperature conditioned
9 air, each heat pump being connected to the seat by an air conduit
10 and including one or more fan and one or more thermoelectric
11 module;

12 a controller for activating and regulating the operation of
13 each heat pump to produce temperature conditioned air at a
14 temperature and fan speed to maximize the thermal comfort of the
15 seated occupant;

16 at least one temperature sensor for monitoring the operation
17 of at least one heat pump, the temperature sensor being
18 electrically connected to the controller;

19 means for automatically operating the controller to optimize
20 system response, to provide maximum thermal comfort to the seated
21 occupant, and to control heating and cooling functions of the
22 system to minimize occupant discomfort and adverse physiological
23 response; and

24 an indicator for detecting the presence of the seat occupant,
25 the indicator being electrically connected to the controller.

1 13-51. (Amended) [The system as recited in claim 1] A system
2 for controlling the temperature climate in a variable temperature
3 occupant seat comprising:

[Serial No. 08/156,052

4 an occupant seat having means to distribute temperature
5 conditioned air through the seat and the temperature conditioned
6 air through the seat for the purpose of increasing a seat
7 occupant's thermal comfort;

8 at least one heat pump for providing temperature conditioned
9 air, each heat pump being connected to the seat by an air conduit
10 and including one or more fan and one or more thermoelectric
11 module;

12 a controller for activating and regulating the operation of
13 each heat pump to produce temperature conditioned air at a
14 temperature and fan speed to maximize the thermal comfort of the
15 seated occupant;

16 at least one temperature sensor for monitoring the operation
17 of at least one heat pump, the temperature sensor being
18 electrically connected to the controller; and

19 means for automatically operating the controller to optimize
20 system response, to provide maximum thermal comfort to the seated
21 occupant, and to control heating and cooling functions of the
22 system to minimize occupant discomfort and adverse physiological
23 response, wherein the means for automatically operating the
24 controller reduces the cooling functions of the system when the
25 temperature of the temperature conditioned air is below a minimum
26 cooling temperature and after a maximum amount of time has passed
27 since the system was placed in a cooling mode of operation.

[Please amend claim 54 as follows:

1 16 54. [The system as recited in claim 7] A system for
2 controlling the temperature climate in a variable temperature
3 occupant seat comprising:

4 an occupant seat having means for distributing temperature
5 conditioned air through the seat to increase a seat occupant's
6 thermal comfort;

7 at least one heat pump connected to the seat by an air conduit
8 for providing temperature conditioning air to the seat, each heat
9 pump comprising:

10 at least one thermoelectric module for temperature
11 conditioning the air;

12 at least one fan for passing the temperature conditioned
13 air through the seat to an occupant and for removing unwanted
14 thermal energy from the thermoelectric module;

15 a controller for activating and regulating the operation of
16 the thermoelectric module and fans of each heat pump independent of
17 occupant input after a desired mode of operation has been selected;

18 means for automatically operating the controller to optimize
19 system response, to provide maximum thermal comfort to the seated
20 occupant, and to control cooling functions of the system to
21 minimize occupant discomfort and adverse physiological response,
22 wherein the means for automatically operating the controller
23 reduces the cooling functions of the system when the temperature of
24 the temperature conditioned air is below a minimum cooling
25 temperature and after a maximum amount of time has passed since the
26 system was placed in a cooling mode of operation.

Please cancel claims 55 and 56

Please amend claim 57 as follows:

1 17 st. (Amended) [The system as recited in claim 19] A system
2 for controlling the temperature climate in a variable temperature
3 occupant seat comprising:

4 an occupant seat comprising a seat bottom and a seat back
5 portion each having means for distributing temperature conditioned
6 air through the seat and directing it to an occupant;

7 a seat back heat pump for conditioning the temperature of the
8 air and passing the air through an air conduit to the seat back,
9 the seat back heat pump comprising a main exchanger fan and at
10 least one thermoelectric module;

11 a seat bottom heat pump for conditioning the temperature of
12 the air and passing the air through an air conduit to the seat
13 bottom, the seat bottom heat pump comprising a main exchanger fan
14 and at least one thermoelectric module;

15 a temperature sensor positioned in each heat pump;

16 a controller for automatically activating and regulating the
17 speed of the main fans, and automatically selecting the mode of
18 operation for the thermoelectric module in each heat pump;

19 means for automatically operating the controller to optimize
20 system response, to provide maximum thermal comfort to the seated
21 occupant, and to control cooling functions of the system to
22 minimize occupant discomfort and adverse physiological response,
23 wherein the means for automatically operating the controller
24 reduces the cooling functions of the system when the temperature of
25 the temperature conditioned air is below a minimum cooling
26 temperature and after a maximum amount of time has passed since the
27 system was placed in a cooling mode of operation.
